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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/477,422	01/04/00	SCHAEFFER J	13DV-13434

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EXAMINER	
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ART UNIT	PAPER NUMBER
1762	12

DATE MAILED: 10/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/477,422	SCHAEFFER, JON C.	
	Examiner	Art Unit	
	Timothy H. Meeks	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-111* is/are pending in the application.

4a) Of the above claim(s) *1-7,14,15,19-28,33-43,49-55,60-69,75-88 and 95-111* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-13,16-18,29-32,44-48,56-59,70-74 and 89-94* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-111* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

DETAILED ACTION

Election/Restrictions

The examiner agrees with applicants' arguments set forth in Paper 10 with respect to the grouping of claim 33 and that grouping will be adhered to for the restriction.

Applicant's election with traverse of Group II, claims 8-13, 16-18, 29-32, 44-48, 56-59, 70-74, and 89-94 in Paper No. 10 is acknowledged. The traversal is on the ground(s) that the product could not be made by the process proposed by the examiner because the aluminide would dissolve into the TBC. This is not found persuasive because the process of casting could be performed to form the aluminide coating and then the TBC deposited thereon to produce the same product.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-7, 14, 15, 19-28, 33-43, 49-55, 60-69, 75-88, and 95-111 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention. Applicant timely traversed the restriction (election) requirement in Paper No. 10.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 29-32, 44-48, 56-59, 70-74, and 89-94 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Support for the limitations of "under deposition conditions effective to....", values of greater than 24 to 28% aluminum and 8 to less than 18 wt% platinum, average nickel concentrations, "so as to be non-stoichiometric.....", and "oxidizing the aluminide layer...." in claim 29, values of greater than 24 to 28% aluminum and 8 to less than 18 wt% platinum in claim 56, and values of greater than 24 to 28% aluminum and values of 8 to less than 18 wt% platinum and the claimed average nickel concentrations in claim 89 is totally lacking in the application as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 46 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 46, proper antecedent basis is lacking for "said outer layer region".

Double Patenting

Claims 8-13 and 16-18 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 8-13 and 16-18 of copending Application No. 09/244,578. This is a provisional double-patenting rejection since the conflicting claims have not in fact been patented.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ormum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 47, 73, and 89-94 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 47, 71, and 87-92 of copending Application No. 09/244,578. Although the conflicting claims are not identical, they are not patentably distinct from each other because they differ only in the overlapping concentration ranges of Al, Pt, and Ni.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 8-13, ~~29-32, 44-46~~, 48, ~~56-59~~, and ~~70-72 and 74~~ are rejected under 35 U.S.C. 102(e) as being anticipated by Murphy (5,716,720).

Murphy discloses the claimed process at col. 3, lines 55-58, col. 4, lines 5-19, col. 5, N5 substrate in the examples, and the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 16-18 and 89-94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murphy.

Murphy does not explicitly disclose the aluminum source activity as recited in claims 16 and 87. However, Murphy discloses deposition at low aluminum activity conditions at col. 4, lines 25-30 which one of ordinary would consider to include values in the claimed range. Therefore, use of the claimed aluminum values would have been obvious absent evidence showing criticality of using these values over other "low" activities. The oxidizing step of Murphy meets the annealing/diffusing step of the claims.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shankar (4,501,776).

Shankar discloses the claimed process at col. 1, line 50 to col. 2, line 41 with the exception that the ranges for the process conditions taught by Shankar overlap the claimed ranges. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the ranges disclosed by the reference

because overlapping ranges have been held to be a prima facie case of obviousness, see In re Malagari, 182 USPQ 549.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shankar in view of Duderstadt et al. (5,238,752).

Shankar lacks teaching of EB vapor depositing a columnar structure yttria stabilized zirconia TBC. However, because Duderstadt discloses that deposition of such TBC on platinum aluminide coating by EBPVD provides the advantages described at col. 5, lines 1-10 (abstract, col. 7), it would have been obvious to have deposited the TBC to achieve these advantages.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shankar in view of Wukusick et al. (5,100,484).

Shankar teaches nickel-based alloy turbine substrates but does not disclose the contents of aluminum, rhenium, etc. thereof. However, because Wukusick discloses that substrates with the claimed components are known alloys for use as turbine parts, it would have been obvious to use such conventional substrates with the expectation of their being effective for turbine substrates.

Claims ~~56-59 and 70-74 are~~ 73 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (ASME article) in view of Duderstadt.

Conner discloses the claimed process at page 2, "Platinum Aluminide Coating", Figure 3, and page 5 with the exception that Conner does not teach depositing a TBC. Application of a TBC would have been obvious in view of Duderstadt for the reasons set forth above.

Claims 8, 10, 11, and 89-92 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (ASME article) in view of Shankar.

Conner discloses the claimed process at page 2, "Platinum Aluminide Coating", Figure 3, and page 5 with the exception that Conner is silent as to particular aluminiding and platinum diffusion conditions. It would have been obvious to use the claimed diffusion and aluminiding conditions in view of Shankar for the reasons set forth above.

Claims 93 and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (ASME article) in view of Shankar as applied above and further in view of Duderstadt.

Application of a TBC would have been obvious in view of Duderstadt for the reasons set forth above.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (ASME article) in view of Shankar as applied above and further in view of Wukusick.

Use of the claimed substrates would have been obvious in view of Wukusick for the reasons set forth above.

No rejections based upon prior art are applied to claim 47 in this office action because the art does not teach or reasonably suggest the limitation that both Al and Pt concentration decrease with depth of the intermediate phase as claimed. The closest art is Murphy, however, it is explicitly disclosed therein that Pt concentration decreases with depth in the intermediate phase.

However, applicants do not have support for the remaining limitations in this claim as identified above, therefore, the claim is not patentable under 35 USC 112, first paragraph.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy H. Meeks whose telephone number is (703) 308-3816. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P. Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Timothy H. Meeks
Primary Examiner
Art Unit 1762

1nf
September 29, 2001